WE CLAIM AS OUR INVENTION:

1. A precursor composition for forming a biologically active anatomical occlusion in an anatomical cavity, comprising:

a) a biodegradable, polymeric occlusion-forming component; and

b) a biologically active component,

wherein said precursor composition forms a biologically active occlusion mass when introduced into the anatomical cavity.

2. The precursor composition of claim 1 wherein the polymeric occlusion-forming component comprises a biodegradable polymer dissolved in a biologically tolerated solvent, said polymer precipitating from said precursor composition when introduced into the anatomical cavity.

3. The precursor composition of claim 1 wherein the polymeric occlusion-forming component comprises a biodegradable component reactively forming a polymer mass when introduced into the anatomical cavity.

4. The precursor composition of claim 1 wherein the polymeric occlusion-forming component comprises a biodegradable polymer selected from biodegradable polyesters.

5. The precursor composition of claim 4 wherein the biodegradable polyester are selected from polyglycolic acids, polylactic acids, polycaprolactone, and their copolymers and copolymers with trimethylene carbonate..

6. The precursor composition of claim 4 wherein the biodegradable polymer is selected from polyhydroxybutyrate and polyhydroxyvalerate and their copolymers.

7. The precursor composition of claim 4 wherein the biodegradable polymer is a polyanhydride.

8. The precursor composition of claim 1 further comprising a biologically tolerated solvent.

9. The precursor composition of claim 1 wherein said biologically active component is selected from the group consisting of collagen, fibrinogen, vitronectin, plasma proteins, growth factors, synthetic peptides of these and other proteins having attached RGD (arginine-glycine-aspartic acid) residues at one or both termini, cell adhesion peptides, oligonucleotides, full or partial DNA constructs, natural or synthetic phospholipids, polymers with phosphorylcholine functionality, and polynucleotide sequences encoding peptides (*e.g.*, genes) involved in wound healing or promoting cellular attachment.

10. The precursor composition of claim 1 wherein said biologically active component is selected from the group consisting of genes, growth factors, biomolecules, peptides, oligonucleotides, members of the integrin family, RGD-containing sequences, and oligopeptides.

11. The precursor composition of claim 10 wherein said oligopeptides are selected from the group consisting of fibronectin, laminin, bitronectin, hyaluronic acid, silk-elastin, elastin, fibrinogen, and other basement membrane proteins.

12. A solid, bioactive, biodegradable polymeric occlusive mass.

13. The occlusive mass of claim 12 wherein the mass contains a biodegradable polymer selected from biodegradable polyesters.

14. The occlusive mass of claim 12 wherein the biodegradable polyesters are selected from polyglycolic acids, polylactic acids, polycaprolactone, and their copolymers and copolymers with trimethylene carbonate.

15. The occlusive mass of claim 14 wherein the mass contains a biodegradable polymer selected from polyhydroxybutyrate and polyhydroxyvalerate and their copolymers.

16. The occlusive mass of claim 14 wherein the mass contains a polyanhydride.

17. The occlusive mass of claim 12 wherein the mass contains a biologically active component selected from the group consisting of collagen, fibrinogen, vitronectin, plasma proteins, growth factors, synthetic peptides of these and other proteins having attached RGD (arginine-glycine-aspartic acid) residues at one or both termini, cell adhesion peptides, oligonucleotides, full or partial DNA constructs, natural or synthetic phospholipids, polymers with phosphorylcholine functionality, and polynucleotide sequences encoding peptides (*e.g.*, genes) involved in wound healing or promoting cellular attachment.

18. The occlusive mass of claim 12 wherein the mass contains a biologically active component selected from the group consisting of genes, growth

factors, biomolecules, peptides, oligonucleotides, members of the integrin family, RGD-containing sequences, and oligopeptides.

19. The occlusive mass of claim 18 wherein said oligopeptides are selected from the group consisting of fibronectin, laminin, bitronectin, hyaluronic acid, silk-elastin, elastin, fibrinogen, and other basement membrane proteins.

20. A kit for forming a composite biologically active anatomical occlusion in an anatomical cavity, comprising:

a) at least one solid vaso-occlusive device, and

b.) a liquid precursor composition comprising:

i. ) a biodegradable, polymeric occlusion-forming component; and

ii.) a biologically active component,

wherein said liquid precursor composition forms a biologically active occlusion mass when introduced into the anatomical cavity.

21. The kit of claim 20 wherein said at least one solid vaso-occlusive device comprises a coil.

22. The kit of claim 21 wherein said biodegradable, polymeric occlusion-forming component comprises a biodegradable polymer selected from biodegradable polyesters.

23. The kit of claim 22 wherein said biodegradable polyesters are selected from polyglycolic acids, polylactic acids, polycaprolactone, and their copolymers and their copolymers with trimethylene corbonate.

24. The kit of claim 22 wherein the biodegradable polymer is selected from polyhydroxybutyrate and polyhydroxyvalerate and their copolymers.

25. The kit of claim 22 wherein the biodegradable polymer is a polyanhydride.

26. The kit of claim 20 wherein the liquid precursor composition further comprises a biologically tolerated solvent.

27. The kit of claim 20 wherein said biologically active component is selected from the group consisting of collagen, fibrinogen, vitronectin, plasma proteins, growth factors, synthetic peptides of these and other proteins having attached RGD (arginine-glycine-aspartic acid) residues at one or both termini, cell adhesion peptides, oligonucleotides, full or partial DNA constructs, natural or synthetic phospholipids, polymers with phosphorylcholine functionality, and polynucleotide sequences encoding peptides (*e.g.*, genes) involved in wound healing or promoting cellular attachment.

28. The kit of claim 20 wherein said biologically active component is selected from the group consisting of genes, growth factors, biomolecules, peptides, oligonucleotides, members of the integrin family, RGD-containing sequences, and oligopeptides.

29. The kit of claim 28 wherein said oligopeptides are selected from the group consisting of fibronectin, laminin, bitronectin, hyaluronic acid, silk-elastin, elastin, fibrinogen, and other basement membrane proteins

30. A procedure for at least partially filling an anatomical cavity comprising the steps of:

a.) introducing the precursor composition of claim 1 into said anatomical vessel,

b.) precipitating said biodegradable, polymeric occlusion-forming component and said biologically active component into said biologically active occlusion mass in said anatomical cavity.

31. The procedure of claim 30 further comprising the prior step of introducing a mechanical vaso-occlusive device into said anatomical cavity.